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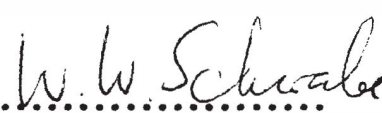
***IN VITRO* CULTURE OF *METROXYLON SAGU*
THE SAGO PALM - A PRELIMINARY STUDY**

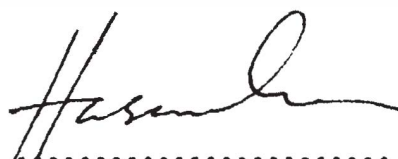
BASKARAN KRISHN APILLAY

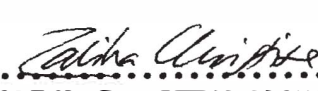
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Date : November, 1986


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IN VITRO CULTURE OF *METROXYLON SAGU* -
THE SAGO PALM - A PRELIMINARY STUDY

by

BASKARAN KRISHNAPILLAY

A Thesis submitted in partial fulfilment of the
requirements for the Degree of Master of Science
in the Faculty of Science and Environmental Studies,
Universiti Pertanian Malaysia

November 1986



DEDICATED

to the memory of my late

Father

VARGHESE KRISHNAPILLAY

and

to my Mother whose patience and

understanding has been a

constant source of

inspiration for

me throughout

this study

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LIST OF ABBREVIATIONS

ANOVA	-	analysis of variance
BAP	-	benzylaminopurine
°C	-	degrees centigrade
cm²	-	square centimetre
2, 4-D	-	2, 4-dichlorophenoxyacetic acid
df	-	degree of freedom
DNMRT	-	Duncan's new multiple range test
EtOH	-	ethyl alcohol
Fe-EDTA	-	ferrous-ethylenediaminetetraacetic acid
g l⁻¹	-	grams per litre
HCl	-	hydrochloric acid
HgCl₂	-	mercuric chloride
IAA	-	indole-3-acetic acid
IBA	-	indole-3-butyric acid
2iP	-	N ⁶ -(Δ ² - isopentenyl) adenine
Kg/cm³	-	kilogram per cubic centimetre
KH₂PO₄	-	potassium di-hydrogen phosphate
M	-	molar
mg l⁻¹	-	milligram per litre
mm	-	millimetre
MS	-	Murashige and Skoog medium formulation (1962)
M.S.	-	mean sum of squares
NAA	-	⌵ - naphthalene acetic acid
NaH₂PO₄	-	sodium di-hydrogen phosphate
P.C.I	-	medium formulation (Smith and Thomas, 1973)

P.C.m	-	medium formulation (Smith and Thomas, 1973)
S.D.	-	standard deviation
S.S.	-	sum of squares
2, 4, 5-T	-	2, 4, 5 - trichlorophenoxyacetic acid
Y₃	-	medium formulation (Eeuwens, 1976)
%	-	percentage

ABSTRACT

An abstract of the thesis presented to the Senate of Universiti Pertanian Malaysia in partial fulfilment of the requirement for the Degree of Master of Science.

IN VITRO CULTURE OF *METROXYLON SAGU* - THE SAGO PALM - A PRELIMINARY STUDY

by

BASKARAN KRISHNAPILLAY

November, 1986

Supervisor : Dr Zaliha Christine Alang
Faculty : Science and Environmental Studies
Key Words : *Metroxylon sagu*, embryo culture, *in vitro*,
sago palm.

The sago palm (*Metroxylon sagu*) is an under-exploited starch storing tropical crop which has great commercial potential.

Excised embryos of this palm were cultured *in vitro* for the first time. Suitable sterilization methods, media, addenda and cultural conditions for normal development of embryos and for callus production from excised embryos were investigated. As a large number of fruit (1 000 - 2 000) were